

Properties and Changes in Matter

2-4 The student will demonstrate an understanding of the properties of matter and the changes that matter undergoes. (Physical Science)

Key Concepts: properties, solids, liquids, heating, cooling, cutting, tearing, bending, stretching, mixed, separated

Supporting Content Web Sites

Chem4Kids.com

http://www.chem4kids.com/files/matter_mixtureex.html

A description is given of creating the mixtures concrete and salt water and then separating the components. **NOTE:** Information too advanced for students; some information appropriate for teacher background information

2-4.4

Suggested Literature

Bauer, D. (2004). *Everything is Matter!* Minnesota: Yellow Umbrella Books.

ISBN 0-7368-2942-3

The three states of matter are introduced.

2-4.1

Curry, D.L. (2004). *What is Matter?* New York: Children's Press.

ISBN 0-516-24667-4

Lexile Level 340

Matter is explained and the three states of matter are described.

2-4.1

Frost, H. (2000). *Water as a Solid.* Minnesota: Pebble Books/Capstone Press.

ISBN 0-7368-0411-0

Lexile Level 260

Properties and uses of water in its solid state are discussed.

2-4.1

Nelson, R. (2003). *Freezing and Melting.* Minnesota: Lerner.

ISBN 0-8225-4590-X

How water changes from a liquid to a solid and from a solid to a liquid is explained.

2-4.2

Royston, A. (2003). *Bendy and Rigid.* Illinois: Heinemann Library.

ISBN 1-40340-858-0

Properties of solids are discussed and familiar objects are categorized as rigid or bendy.

2-4.3

Suggested Data Streaming Video

<http://www.scetv.org/education/streamlinesc> See your school's media specialists for User ID and User Password. Also, you may call Ms. Donna Thompson at ETV at 803-737-3322 for a User ID and User Password.

Solids, Liquids, and Gases: A First Look

Solids, Liquids

ETV Streamline SC

Characteristics of solids and liquids are given and the two are compared.

1:58 to 7:37

2-4.1

Solids, Liquids, and Gases: A First Look

Melting and Freezing

ETV Streamline SC

Common examples of melting and freezing are shown and discussed.

10:43 to 11:49

2-4.2, 2-4.3

Career Connections

Chemist

Chemists study the properties of matter. Matter can be referred to as chemicals. Everything is made of chemicals. Chemists find ways to make chemicals useful to us. They also try to improve things that people use daily, such as paint, medicines and cosmetics, as well as cars and airplanes. Chemists also search for new chemicals in nature. They search for ways to save energy and reduce pollution. Their research on living things helps doctors, farmers, and food preparers do their jobs better.

Pharmacist

Pharmacists give medicine to people when a doctor says that they need it. Sometimes, pharmacists mix the medicine themselves. Most often, though, they use medicines that are already made. Pharmacists have to know the properties of the medicines they give out.